

### **REMARKS**

Applicant appreciates the Examiner's thorough consideration provided in the present application. Claims 1-9 are now present in the application. Claim 1, 4 and 5 have been amended. Claims 8 and 9 have been added. Claims 1 and 4 are independent. Reconsideration of this application, as amended, is respectfully requested.

#### **Claim Rejections Under 35 U.S.C. § 103**

Claims 1, 2, 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki et al., U.S. Patent No. 6,407,791 (hereinafter "Suzuki") in view of Inoue et al., U.S. Patent No. 5,781,256 (hereinafter "Inoue"). Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki in view of Inoue, and further in view of Watanabe et al., U.S. Patent No. 5,815,223 (hereinafter "Watanabe"). Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki in view of Inoue, and further in view of Nimura et al., U.S. Application Publication No. 2003/0174267 (hereinafter "Nimura"). Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki in view of Inoue, and further in view of Hwang et al., U.S. Application Publication No. 2002/0158995 (hereinafter "Hwang"). These rejections are respectfully traversed.

A complete discussion of the Examiner's rejections is set forth in the Office Action, and is not repeated herein.

Without conceding to the propriety of the Examiner's rejection, but merely to timely advance the prosecution of the application, as the Examiner will note, independent claims 1 and 4 have been amended to more clearly clarify the present invention, respectively.

In particular, independent claims 1 and 4 now include the recitation of "...a *gate insulating film having a plurality of hollow portions over said source electrode and said drain electrode to provide a relatively thin film portion partially on said source electrode and said drain electrode...*" Support for this amendment can be found at least at, for example, Fig. 8a,

paragraph [0042] and [0047] of the Specification as originally filed. Thus, no new matter has been added. Applicant respectfully submits that the above-emphasized feature set forth in claims 1 and 4 is not disclosed or suggested by the references relied on by the Examiner.

Specifically, as embodied in Fig. 4 of the present application, the gate insulating film 34 having a plurality of hollow portions over the metal film 33 to provide relatively thin film portions (having thickness D2) on the metal film 33. Further, referring to Fig. 8a of the present application, a dry etching is performed to remove the exposed silicon nitride film 34 to form the hollow portion 39 (over the metal film 33) in the silicon nitride film 34 of the region X in which the MIM is formed (see paragraph [0047]). Thus, the hollow portion provides a relatively thin portion partially on the source electrode and the drain electrode.

With regard to the Examiner's reliance on Suzuki, however, referring to Fig. 18 of Suzuki, the gate insulating film 61, which is referred to as the gate insulating film of the present invention by the Examiner, is conformably formed over the source electrode 57 and the drain electrode 58 without being etched. In other words, there is no hollow portions in the gate insulation film 61 of Suzuki. Even if the Examiner refers to the portion formed in the gap between the source electrode 57 and the drain electrode 58 in Suzuki as shown in Fig. 18 thereof, Suzuki still fails to teach or suggest "*a gate insulating film having a plurality of hollow portions over said source electrode and said drain electrode to provide a relatively thin film portion partially on said source electrode and said drain electrode*" as recited in claims 1 and 4.

With regard to the Examiner's reliance on other secondary references, these references have only been relied on for their teachings against some other features of the present invention. It is submitted that these references also fail to disclose the above-mentioned features set forth in claims 1 and 4, and thus fails to cure the deficiencies of Suzuki and Inoue.

Since the references relied on by the Examiner, either taken alone or in combination, fail to teach each and every claimed feature as recited in claims 1 and 4, Applicant respectfully

submits that claims 1 and 4 clearly define over the teachings of the references relied on by the Examiner.

In addition, claims 2, 3 and 5-7 depend, either directly or indirectly, from independent claims 1 and 4, and are therefore allowable based on their respective dependence from independent claims 1 and 4, which are believed to be allowable.

In view of the above amendments to the claims and remarks, Applicant respectfully submits that claims 1-7 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are respectfully requested.

#### **Additional Claims**

Claims 8 and 9 have been added for the Examiner's consideration. Support for the new claims can be found at least at, for example, Fig. 4 and the corresponding disclosure of the Specification as originally filed. Thus, no new matter has been added.

Applicant respectfully submits that claims 8 and 9 depend directly from independent claim 1, and are therefore allowable based on their dependence from independent claim 1, which is believed to be allowable, or as well as due to the additional novel features set forth therein.

For example, new claim 8 includes the recitation of "*said plurality of hollow portions are formed **directly above** said source electrode and said drain electrode.*" Applicants respectfully submit that neither of the references relied on by the Examiner teaches or suggests the above feature set forth in claim 8.

With regard to new claim 9, this claim includes the recitation of "***said gate insulating film has a larger thickness in areas without source electrode and drain electrode formed thereon than areas with said source electrode and said drain electrode formed thereon.***" Applicant respectfully submits that neither of the references relied on by the Examiner teaches or

suggests the above feature set forth in claim 9. In particular, with regard to the Examiner's reliance on Suzuki, as clearly shown in Fig. 18 of Suzuki, the gate insulating film 61, which is referred to as the gate insulating film of the present invention by the Examiner, clearly has a consistent thickness.

Based on the additional reasons above, it is submitted that claims 8 and 9 clearly defines over the references relied on by the Examiner.

Favorable consideration and allowance of claims 8 and 9 are respectfully requested.

### **CONCLUSION**

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Paul C. Lewis, Registration No. 43,368 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

By 

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